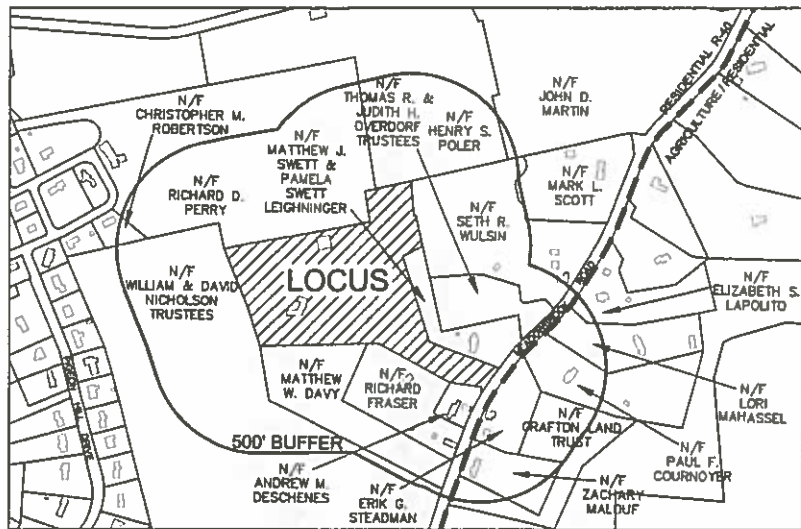


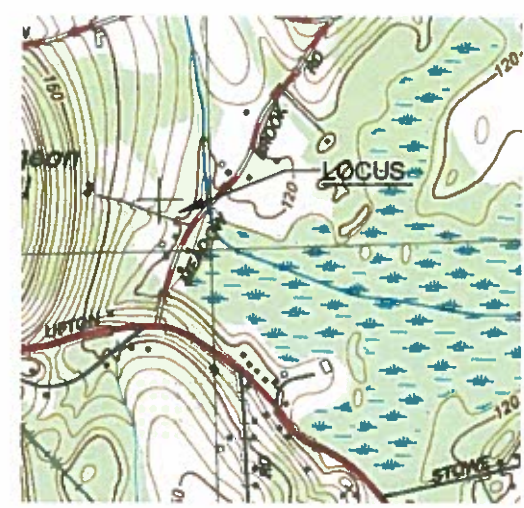
DEFINITIVE SUBDIVISION PLAN of "MEADOWBROOK MANOR"

GENERAL NOTES

- 1.) EXISTING TOPOGRAPHICAL INFORMATION WAS PREPARED BY SUMMIT ENGINEERING & SURVEY, INC. ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM OF 1988. HORIZONTAL COORDINATES ARE ON MASS STATE PLANE.
- 2.) ALL MATERIALS AND CONSTRUCTION PRACTICES SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS (MDPW) CONSTRUCTION STANDARDS AND THE MDPW "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES", UNLESS OTHERWISE SPECIFIED BY LOCAL AUTHORITY OR THE ENGINEER.
- 3.) THE CONTRACTOR SHALL UTILIZE ALL MEASURES AND MATERIALS NECESSARY TO ENSURE THE SAFETY OF ALL PERSONS AND PROPERTIES AT THE SITE DURING CONSTRUCTION. ALL EXCAVATIONS SHALL CONFORM TO CURRENT OSHA STANDARDS.
- 4.) UNLESS OTHERWISE NOTED, ALL DISTURBED AREAS SHALL BE DRESSED WITH A MINIMUM OF FOUR INCHES (4") OF LOAM AND SHALL BE SEEDED WITH AN APPROVED GRASS MIX.
- 5.) THE CONTRACTOR SHALL PROVIDE APPROPRIATE EROSION AND SEDIMENTATION CONTROL MEASURES AT ALL TIMES. DEWATERING OPERATIONS SHALL BE PROVIDED, IF REQUIRED; ALL DISCHARGE SHALL PASS THROUGH SEDIMENTATION CONTROL DEVICES TO PREVENT IMPACTS UPON WATER BODIES, BORDERING VEGETATED WETLANDS, DRAINAGE SYSTEMS AND ADJUTING PROPERTIES.
- 6.) DISTURBED AREAS SHALL BE STABILIZED BY LOAMING AND SEEDING SOON AFTER THE FINISHED GRADE HAS BEEN MET. IF FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED WITH HAY SECURED BY WEIGHTED SNOW FENCE, CHICKEN WIRE MESH OR JUTE NETTING WITH STAPLES. SEED FOR PERMANENT GRASS COVER SHOULD BE ACCORDING TO SOIL CONSERVATION SERVICE GUIDELINES FOR SOIL AND MOISTURE CONDITIONS FOUND ON THE SITE.
- 7.) SEDIMENTATION CONTROL FENCE AND/OR HAY BALES SHALL BE MAINTAINED UNTIL ALL SLOPES HAVE BEEN STABILIZED AND THERE IS NO DANGER OF EROSION DIRECTLY ONTO ADJUTING PROPERTIES.
- 8.) PRIOR TO INITIATING CONSTRUCTION, SEDIMENTATION CONTROL DEVICES SHALL BE INSTALLED. THE CONTRACTOR SHALL MAINTAIN THE DEVICES UNTIL ALL WORK IS COMPLETE AND ALL AREAS HAVE BEEN STABILIZED.
- 9.) IF THE PROPOSED ROADWAY AREAS ARE NOT PAVED IMMEDIATELY AFTER THE INSTALLATION OF THE DRAINAGE STRUCTURES, HAY BALES SHALL BE PLACED TO PROTECT THE INTEGRITY OF THE STRUCTURES.
- 10.) THE LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES ARE BASED ON FIELD AND RECORD INFORMATION. THE ENGINEER DOES NOT GUARANTEE THEIR ACCURACY OR THAT ALL UTILITIES AND SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION AND INVERT ELEVATIONS OF STRUCTURES AND UTILITIES, AS REQUIRED PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES WITH RECORD DATA SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. PRIOR TO, AND DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE LOCAL UTILITY COMPANIES, WITH THE TOWN OF GRAFTON HIGHWAY DEPARTMENT, OTHER TOWN UTILITY DEPARTMENTS, APPLICABLE PRIVATELY OWNED UTILITY COMPANIES AND DIG-SAFE (1-888-344-7233) TO VERIFY UTILITY LOCATION AND TO PROTECT UTILITIES DURING AND AFTER CONSTRUCTION.
- 11.) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK WITH THE APPROPRIATE HIGHWAY AND UTILITY DEPARTMENTS. CONTRACTOR SHALL MAINTAIN ALL EXISTING AND NEWLY INSTALLED UTILITIES IN GOOD WORKING ORDER AND SHALL PROTECT THEM FROM DAMAGE AT ALL TIMES UNTIL THE WORK IS COMPLETED AND ACCEPTED.
- 12.) THE CONTRACTOR SHALL PROVIDE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH THE TOWN OF GRAFTON REQUIREMENTS.
- 13.) NO TRENCHES SHALL BE ALLOWED TO REMAIN OPEN OVERNIGHT.
- 14.) ALL POTABLE WATER AND SANITARY BUILDING SERVICE CONNECTIONS SHALL BE SEPARATED HORIZONTALLY BY A MINIMUM OF TEN FEET.
- 15.) ROADWAY SUBDRAINS SHALL BE INSTALLED WITHIN THE RIGHT OF WAY AND IN DETAIL WHEREVER THE EXCAVATION CUTS EXCEED FOUR FEET. CONTRACTOR SHALL PROVIDE AN APPROPRIATE HORIZONTAL SEPARATION BETWEEN SUBDRAINS AND UTILITY CONDUITS (3' OR AS REQUIRED BY UTILITY PROVIDER.)
- 16.) TREE WORK MUST BE COMPLETED BY COMPANIES HOLDING CURRENT COMPLIANCE AGREEMENTS WITH THE MASSACHUSETTS LONGHORNED BEETLE ERADICATION PROJECT. ANY COMPANY CAN BECOME COMPLIANT BY ATTENDING A TRAINING SESSION AT THE PROGRAM OFFICE IN WORCESTER, MA.



LOCUS MAP (1" = 400')



LOCUS MAP (1" = 1000')

OWNER / APPLICANT:
ROBERT G. FLYNN SR.,
SUGAR REALTY TRUST
15 MEADOWBROOK ROAD
GRAFTON, MA 01519

DEED REFERENCES:
BOOK 45004 PG 398

PLAN REFERENCE:
PLAN BOOK 432 PAGE 107

ASSESSORS MAP 163 PARCEL 219

LIST OF DRAWINGS:

SHEET - 1	COVER SHEET
SHEET - 2	EXISTING CONDITIONS
SHEET - 3	LOTING PLAN
SHEET - 4	SITE PLAN
SHEET - 5	PROFILE
SHEET - 6	CONSTRUCTION DETAILS
SHEET - 7	CONSTRUCTION DETAILS

LOT ZONING SUMMARY

Zone: R-40, Low Density Residential
Overlay: None

	Lot Area	Frontage/Lot Width	Front	Yard	Side	Rear
Required	40,000 S.F.	140 ft	30 ft	15 ft	15 ft	15 ft
Provided	>40,000 S.F.	90 ft (on culdesac) See Plan	-- ft	-- ft	-- ft	-- ft

RECEIVED

APR - 2 2019

EXHIBIT 2.

FOR PERMITTING PURPOSES ONLY
NOT FOR CONSTRUCTION

COPY

PLANNING BOARD
GRAFTON, MA

TOWN OF GRAFTON
PLANNING BOARD
DEFINITIVE APPROVAL
APPROVAL UNDER THE SUBDIVISION
CONTROL LAW IS REQUIRED

DATE

BEING A MAJORITY OF THE BOARD

THIS IS TO CERTIFY THAT NOTICE FROM THE
PLANNING BOARD OF APPROVAL WAS RECEIVED
AND RECORDED BY ME ON _____
AND THAT NO NOTICE OF APPEAL OF SUCH
APPROVAL WAS RECEIVED BY ME DURING THE
TWENTY (20) DAYS NEXT AFTER RECEIPT AND
RECORDING OF SUCH NOTICE OF APPROVAL.

TOWN CLERK
DATE



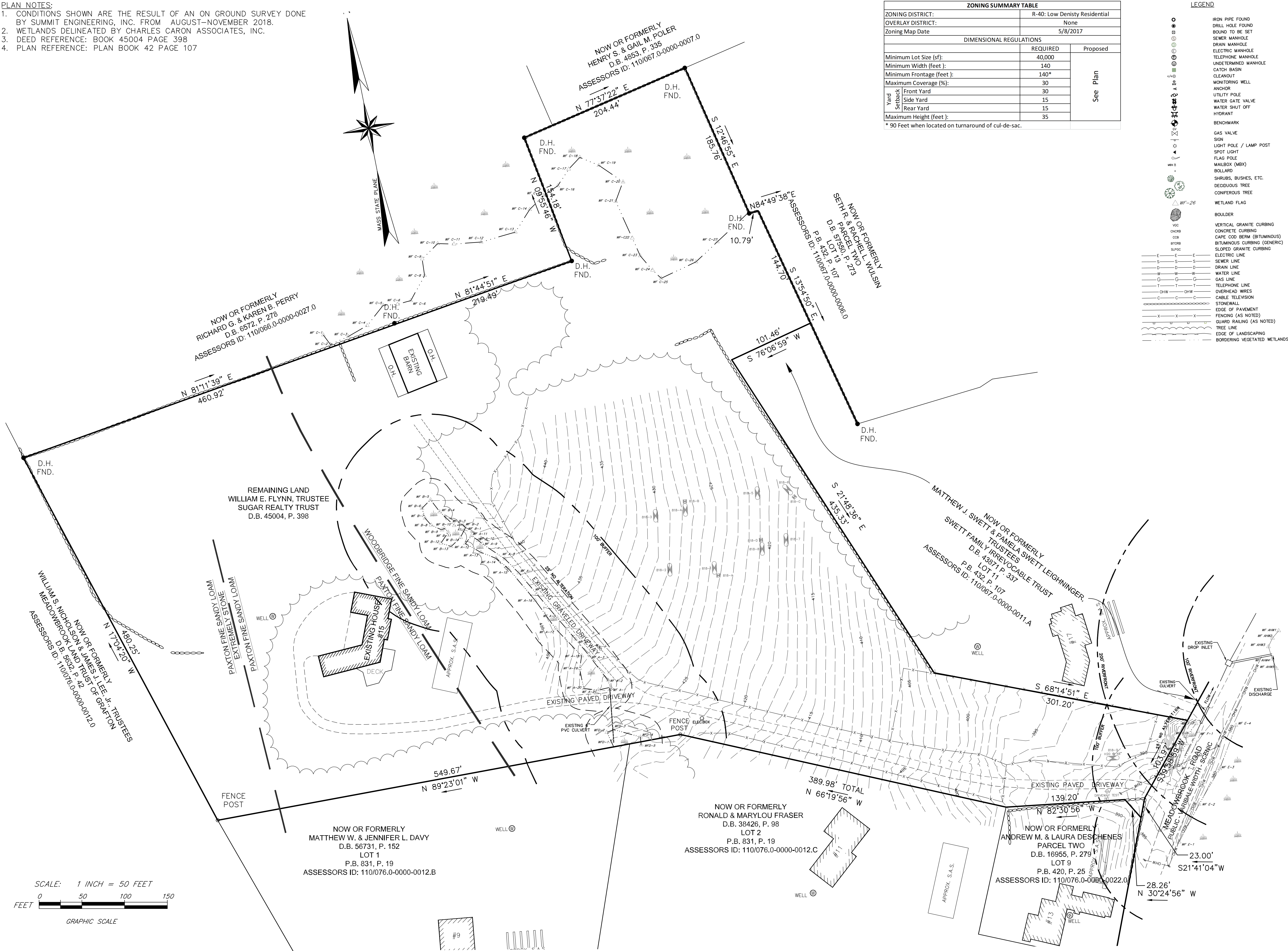
REVISIONS

SUMMIT
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70 MAIN STREET
GRAFTON, MA 01537
P: 508.887.4700 F: 508.887.4704

DEFINITIVE SUBDIVISION
PLAN
"MEADOWBROOK MANOR"
GRAFTON, MA
PREPARED FOR
ROBERT G. FLYNN SR.

SCALE: AS SHOWN
DATE: MARCH 14, 2019
JOB NO: 18-102
PLAN NO: 18-102
SHEET NO: 1 OF 7

PLAN NOTES:
1. CONDITIONS SHOWN ARE THE RESULT OF AN ON GROUND SURVEY DONE BY SUMMIT ENGINEERING, INC. FROM AUGUST-NOVEMBER 2018.
2. WETLANDS DELINEATED BY CHARLES CARON ASSOCIATES, INC.
3. DEED REFERENCE: BOOK 45004 PAGE 398
4. PLAN REFERENCE: PLAN BOOK 42 PAGE 107



ZONING SUMMARY TABLE		
ZONING DISTRICT:	R-40: Low Density Residential	
OVERLAY DISTRICT:	None	
Zoning Map Date	5/8/2017	
DIMENSIONAL REGULATIONS		
	REQUIRED	Proposed
Minimum Lot Size (sf):	40,000	See Plan
Minimum Width (feet):	140	
Minimum Frontage (feet):	140*	
Maximum Coverage (%):	30	
Yard Setback:	30	
Side Yard	15	
Rear Yard	15	
Maximum Height (feet):	35	
* 90 Feet when located on turnaround of cul-de-sac.		

LEGEND	
	IRON PIPE FOUND
	DRILL HOLE FOUND
	BOUND TO BE SET
	SEWER MANHOLE
	DRAIN MANHOLE
	ELECTRIC MANHOLE
	TELEPHONE MANHOLE
	UNDETERMINED MANHOLE
	CATCH BASIN
	CLEANOUT
	MONITORING WELL
	ANCHOR
	UTILITY POLE
	WATER GATE VALVE
	WATER SHUT OFF
	HYDRANT
	BENCHMARK
	GAS VALVE
	SIGN
	SPOT LIGHT
	FLAG POLE
	MAILBOX (MBX)
	BOLLARD
	SHRUBS, BUSHES, ETC.
	DECIDUOUS TREE
	WETLAND FLAG
	BOULDER
	VERTICAL GRANITE CURBING
	CONCRETE CURBING
	CAPE COD BERM (BITUMINOUS)
	BITUMINOUS CURBING (GENERIC)
	SLOPED GRANITE CURBING
	ELECTRIC LINE
	SEWER LINE
	DRAIN LINE
	WATER LINE
	GAS LINE
	TELEPHONE LINE
	OVERHEAD WIRES
	CABLE TELEVISION
	STONEWALL
	EDGE OF PAVEMENT
	FENCING (AS NOTED)
	GUARD RAILING (AS NOTED)
	TREE LINE
	EDGE OF LANDSCAPING
	BORDERING VEGETATED WETLANDS

TOWN OF GRAFTON

PLANNING BOARD

DEFINITIVE APPROVAL

APPROVAL UNDER THE SUBDIVISION CONTROL LAW IS REQUIRED

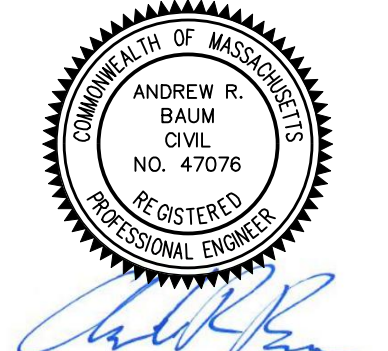
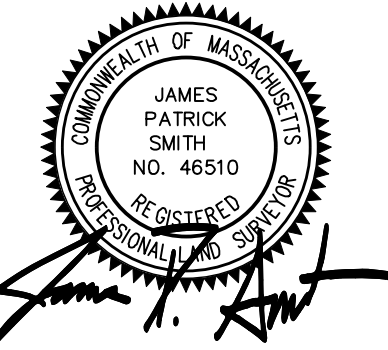
DATE

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TOWN CLERK

DATE



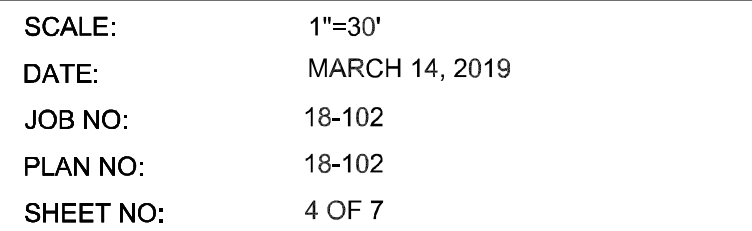
EXISTING CONDITIONS

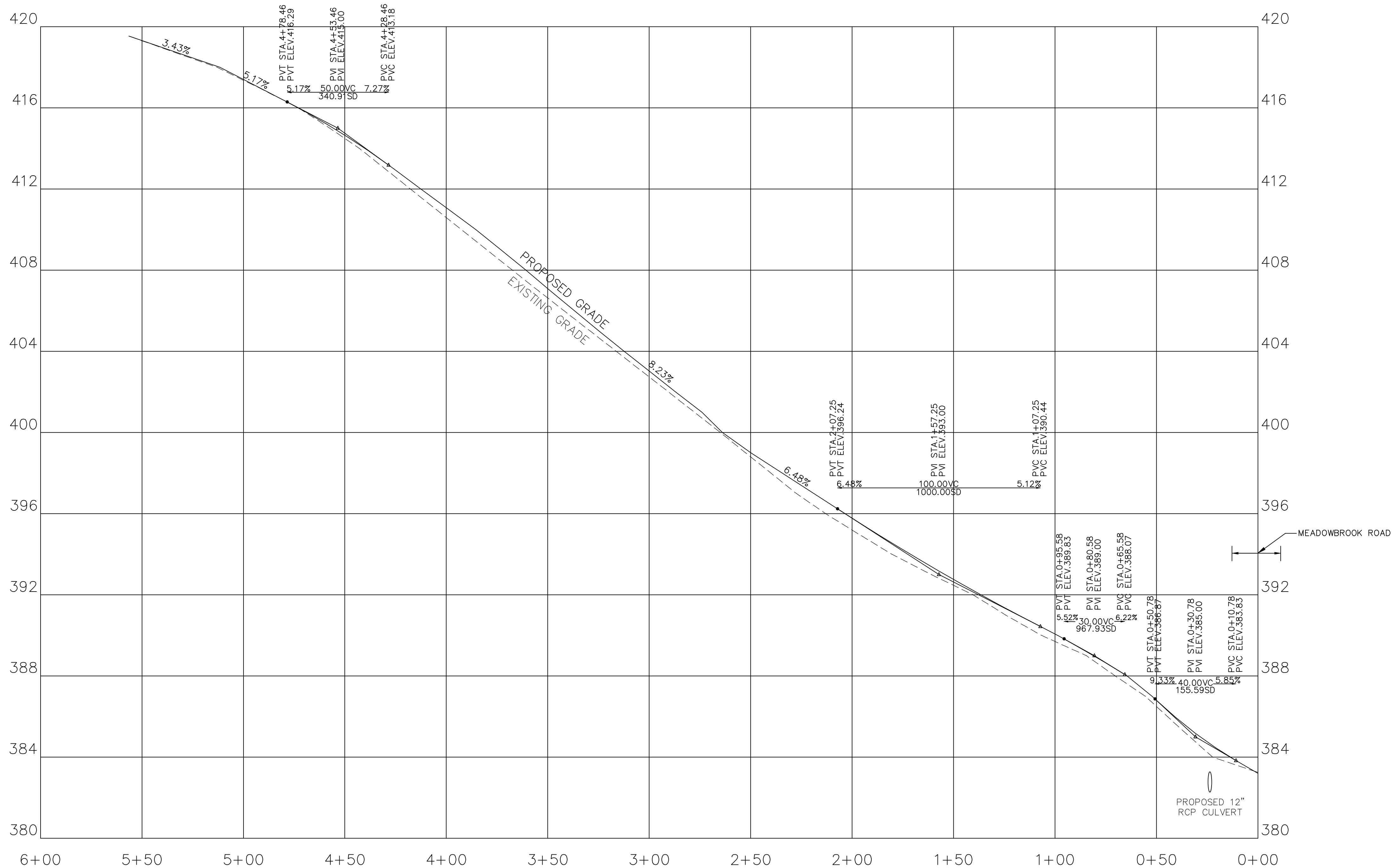
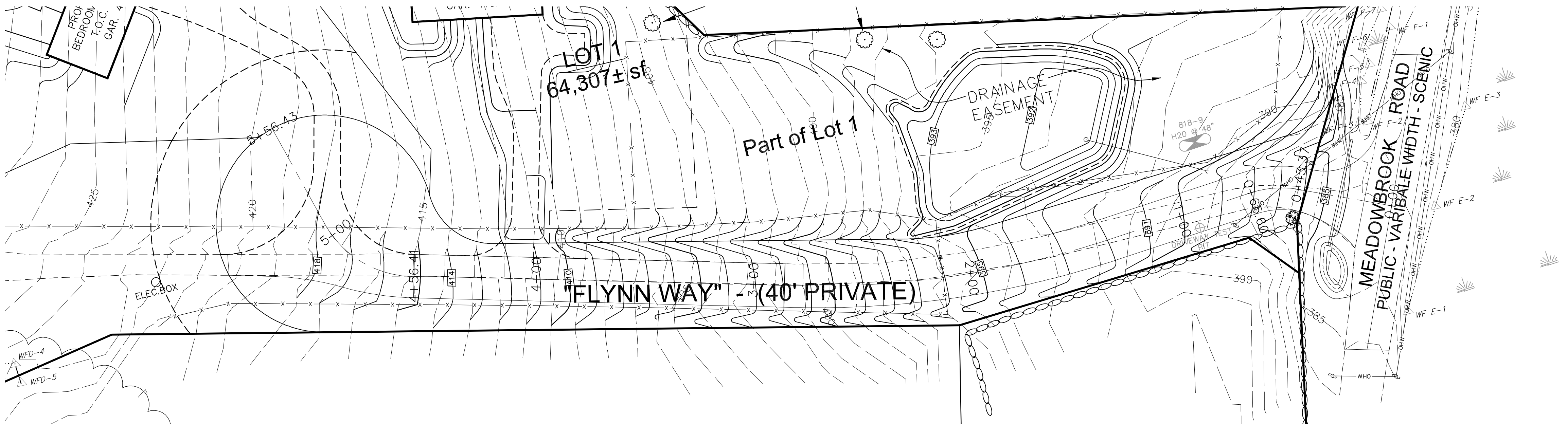
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DEFINITIVE SUBDIVISION PLAN
"MEADOWBROOK MANOR"
GRAFTON, MA
PREPARED FOR
ROBERT G. FLYNN SR.

SCALE: 1"=50'
DATE: MARCH 14, 2019
JOB NO: 18-102
PLAN NO: 18-102
SHEET NO: 2 OF 7





TOWN OF GRAFTON
PLANNING BOARD

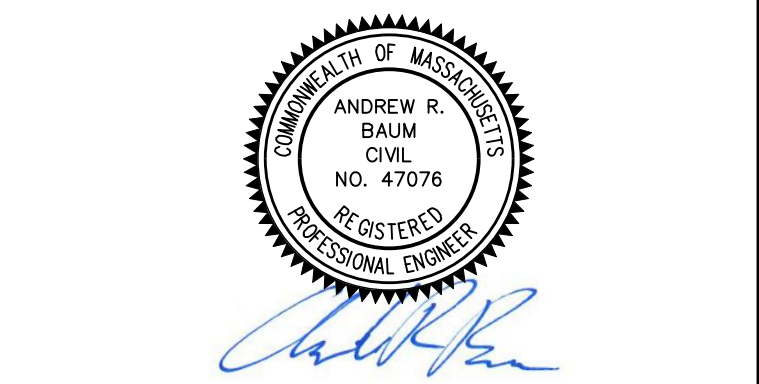
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TOWN CLERK DATE



VERTICAL SCALE: 1 INCH = 3 FEET
0 10 20 40 80
FEET

HORIZONTAL SCALE: 1 INCH = 30 FEET
0 10 20 40 80
FEET

PROFILE

REVISIONS

SUMMIT
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DEFINITIVE SUBDIVISION
PLAN
"MEADOWBROOK MANOR"
GRAFTON, MA
PREPARED FOR
ROBERT G. FLYNN SR.

SCALE: AS SHOWN
DATE: MARCH 14, 2019
JOB NO: 18-102
PLAN NO: 18-102
SHEET NO: 5 OF 7

DRAINAGE SYSTEM OPERATIONS & MAINTENANCE PLAN

STORM WATER COLLECTION SYSTEM:

THE STORMWATER COLLECTION SYSTEM SERVING THIS SITE IS INTENDED TO BOTH COLLECT STORM WATER RUNOFF AND TO PROVIDE PARTIAL TREATMENT OF THE STORMWATER PRIOR TO ITS COLLECTION INTO THE BASINS AND RECHARGE INTO THE GROUNDWATER. WHEN THESE BASIC CONTROL MECHANISMS ARE FUNCTIONING PROPERLY THEY PROVIDE FOR A REDUCTION OF CONTAMINANTS AND DEBRIS ENTERING THE STORMWATER COLLECTION AND RECHARGE SYSTEMS, AND THEREFORE DOWNSTREAM RECEIVING WATERS/WETLANDS.

THIS SITE IS ALSO SERVED BY ROOF DRAIN DRY WELL INFILTRATION SYSTEMS WHICH COLLECT THE GENERATED RUNOFF AND RECHARGE IT TO THE GROUND, THUS PROVIDING RECHARGE SIMILAR TO THAT OF THE UN-DEVELOPMENT CONDITION AND FILTERING THE RUNOFF AS IT TRAVELS THROUGH THE EXISTING SOILS TO THE GROUNDWATER TABLE.

BOTH OF THE ABOVE-DESCRIBED SYSTEMS RELY UPON PROPER MONITORING, OPERATIONS AND MAINTENANCE TO FUNCTION AS DESIGNED AND INTENDED. A PROGRAM OF MONITORING, OPERATIONS AND MAINTENANCE MUST BE ONGOING THROUGHOUT THE LIFE AND USE OF THE SITE, AND IS THE OWNER'S RESPONSIBILITY SOLELY. THESE ACTIVITIES, AS DESCRIBED BELOW, ARE TO BE INITIATED AFTER COMPLETION OF THE PROJECT AND ARE NOT RELATED TO THE CONSTRUCTION OF THE SITE, EXCEPT AS SPECIFICALLY PROVIDED. THIS PLAN IS SPECIFICALLY FOR SITE-RELATED ACTIVITIES, NOT ACTIVITIES WHICH ARE INTERIOR TO THE BUILDING, THOUGH THERE ARE NECESSARY IMPLICATIONS AND CORRELATIONS BETWEEN THE TWO.

MONITORING:

THE DRAINAGE SYSTEMS ARE REQUIRED TO BE MONITORED BY THE OWNER, WHO SHALL DIRECT AN INDIVIDUAL TO ACT AS THE SYSTEM'S MANAGER. THIS INDIVIDUAL SHALL BE REQUIRED TO KEEP A LOG OF ALL REQUIRED INSPECTIONS, OBSERVATIONS AND MAINTENANCE ACTIVITIES. DRAINAGE SYSTEM COMPONENTS SHALL BE REFERRED TO BY SPECIFIC LOCATION OR THE DESIGN PLAN DESIGNATION, (E.G. CTB # 10) TO AVOID CONFUSION OR MIS-IDENTIFICATION. THE LOG SHALL BE MADE AVAILABLE TO REGULATORY AGENCIES WITHIN TEN (10) DAYS OF A WRITTEN REQUEST BY AN AGENCY.

MONITORING FOR THIS SITE SHALL CONSIST OF THE FOLLOWING:

- 1. THE RESPONSIBLE PERSON OR PARTY SHALL BE THE FIRE CHIEF OR HIS DESIGNATED AGENT.
- 2. ALL OUTLETS TO BASINS, OR OTHER DRAINAGE SYSTEMS SHALL BE INSPECTED TO ENSURE THAT NO EROSION IS OCCURRING AT OUTLETS, ALL OUTLETS ARE FREE-FLOWING AND NO DAMAGE HAS OCCURRED AS PART OF SITE MAINTENANCE OR ACTIVITIES.

OPERATIONS:

- 1. GOOD HOUSE KEEPING AND MATERIAL MANAGEMENT REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL RELEASES OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF. A POLLUTION PREVENTION PLAN SHALL BE DEVELOPED WHICH SHALL INCLUDE THE FOLLOWING AT A MINIMUM:
 - A. ALL MATERIALS STORED ON-SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
 - B. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
 - C. SUBSTANCES SHOULD NOT BE MIXED WITH ONE ANOTHER, UNLESS RECOMMENDED BY THE MANUFACTURER.
 - D. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF A CONTAINER.
 - E. THE SYSTEM'S MANAGER SHALL INSPECT THE SITE DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON-SITE
 - F. ORIGINAL MATERIALS LABELS AND MATERIAL SAFETY DATA SHEETS SHALL BE KEPT; THEY RETAIN IMPORTANT INFORMATION.
 - G. PETROLEUM PRODUCTS:
 - 1) ALL ON-SITE VEHICLES AND PARKING AREAS SHALL BE REGULARLY MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO PREVENT LEAKAGE.
 - 2) PETROLEUM PRODUCTS SHALL BE STORED UNDER COVER AND SHALL BE IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.
 - H. FERTILIZERS:
 - 1) FERTILIZERS SHALL ONLY BE USED IN THE MINIMUM AMOUNTS AS RECOMMENDED BY THE MANUFACTURER.
 - 2) THE CONTENTS OF ANY UNUSED FERTILIZER SHALL BE TRANSFERRED TO A CLEARLY LABELED, SEALABLE PLASTIC BIN, TO AVOID SPILLAGE.
 - I. PAINTS, SOLVENTS:
 - 1) ALL PAINTS AND SOLVENTS SHALL BE STORED IN ORIGINAL MANUFACTURER'S CONTAINERS IN A COVERED LOCATION.
 - 2) THE USE OF PAINTS AND SOLVENTS SHALL, WHENEVER POSSIBLE, BE LIMITED TO SERVICE OR STORAGE BAYS AND NOT IN PARKING OR ACCESS WAYS THAT ARE TRIBUTARY TO THE DRAINAGE SYSTEM.
 - J. RESPONSIBLE PERSON: FIRE CHIEF OR DESIGNATED AGENT SHALL BE THE REPORTING AGENT.

- 2. SPILL CONTROL PRACTICES:
 - A. MANUFACTURER'S RECOMMENDED METHODS SHALL BE CLEARLY POSTED FOR SPILL CLEANUP AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF CLEANUP INFORMATION AND SUPPLIES.
 - B. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT ON-SITE IN A DESIGNATED MATERIAL STORAGE AREA. EQUIPMENT WILL INCLUDE, BUT NOT BE LIMITED TO, BROOMS, DUST PANS , MOPS, RAGS, GLOVES, GOGGLES, ABSORBENT MATERIALS, SAND, SAWDUST AND PLASTIC & METAL TRASH CONTAINERS SPECIFICALLY KEPT AND LABELED FOR THIS PURPOSE.
 - C. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
 - D. SPILLS OF TOXIC OR HAZARDOUS MATERIAL OR NATURE WILL BE REPORTED TO THE APPROPRIATE STATE, LOCAL OR FEDERAL AGENCY, AS REQUIRED BY-LAW.
 - E. THE SPILL PREVENTION PLAN WILL INCLUDE PROVISIONS TO ADAPT THE PLAN TO ENSURE THAT SPILLS WILL NOT REOCCUR, AND HOW TO CLEANUP THE SPILL IF THERE IS ANOTHER ONE.
- 3. SITE OPERATIONS AND DAILY USE SHALL CONSIDER THE ULTIMATE DISPOSITION OF STORMWATER AND OTHER SITE-GENERATED FORMS OF RUNOFF. THE WASHING OF VEHICLES SHALL BE LIMITED AREAS WITHIN THE BUILDING, AS THEY ARE SERVED BY THE FLOOR DRAIN SYSTEM. WASH WATER WITH ITS COMBINATION OF SOLVENTS, DETERGENTS AND OILY/GREASES SHOULD NOT BE ALLOWED TO ENTER ANY PART OF THE ON-SITE DRAINAGE SYSTEM.
- 4. SNOW PLOWING – SNOW PLOWING OPERATIONS SHALL STOCKPILE SNOW, ICE AND ACCUMULATED MATERIALS IN AREAS WHERE SNOW MELT WILL FLOW INTO THE ON-SITE DRAINAGE SYSTEMS, INCLUDING DRAINAGE BASINS.
- 5. SALT USE SITE-WIDE SHALL BE APPLIED TO THE MINIMUM EXTENT POSSIBLE TO MAINTAIN SAFE CONDITIONS, AND ONLY IF NOT SPECIFICALLY EXCLUDED BY ANY SPECIAL CONDITIONS AS PART OF ANY ISSUED PERMIT.

MAINTENANCE:

- 1. PARKING AREAS, ACCESS WAYS AND GUTTERS SHALL BE SWPT CLEAN OF DEBRIS AND ACCUMULATION ON A REGULAR BASIS. AT A MINIMUM, A SPRING AND FALL CLEANING SCHEDULE IS RECOMMENDED.
- 2. ALL EROSION AT OUTLETS SHALL BE REPAIRED. THE REPLACEMENT OF ANY PIPE OR DRAINAGE STRUCTURE SHALL MATCH THE ORIGINAL DESIGN SPECIFICATIONS.

DRAINAGE BASIN MAINTENANCE

THE DRAINAGE BASIN DEPICTED ON THE SITE PLAN IS INTENDED TO TREAT THE STORMWATER RUNOFF THAT IS ULTIMATELY TRIBUTARY TO THE LOCAL GROUNDWATER. SIMULTANEOUSLY, THE BASIN WILL ACT TO ENTRAP SEDIMENTS AND OTHER POTENTIAL POLUTANTS PRIOR TO THEIR DISCHARGE TO LOCAL GROUNDWATER. THE BASIN WILL ACCUMULATE THESE MATERIALS AS DEPOSITED DEBRIS, SEDIMENT LAYERS AND EXCESSIVE VEGETATIVE GROWTH WITHIN THE BASIN. THESE MATERIALS WILL BE REQUIRED TO BE REMOVED ON A REGULAR BASIS TO ENSURE THE CONTINUING FUNCTION OF THE BASIN. THE INTENT OF THE BASIN IS TO FUNCTION AS A PREVENTATIVE AND MITIGATION SYSTEM, NOT BECOME A PROTECTED RESOURCE AREA. BASED UPON THE ABOVE, THE FOLLOWING MAINTENANCE CONDITIONS SHALL APPLY AND BE PART OF ANY CONTINUANCE OF THE PROPOSED DEVELOPMENT:

- 1. WEEDS AND WETLANDS PLANTS SHALL BE REMOVED ON A REGULAR BASIS, BUT NOT LESS THAN ONCE PER YEAR IN THE LATE SUMMER. REMOVAL SHALL BE BY HAND, OR BY APPLICATION OF HERBICIDES IF PLANT GROWTH IS TOO PROLIFIC TO MANAGE BY HAND METHODS.
- 2. SIMILARLY, THE DRAINAGE BASIN EMBANKMENTS SHALL BE INSPECTED AT LEAST ONCE PER YEAR FOR TREE AND BRUSH GROWTH. IF NEEDED, REMOVAL OF THIS GROWTH SHALL BE BY HAND (I.E., CHAINSAW, BRUSH-CUTTERS OR MOWERS) BUT SHALL NOT BE REMOVED BY HEAVY MACHINERY OR OTHER METHOD THAT WOULD CONTRIBUTE TO THE INSTABILITY OF THE BASIN BERMS. DURING ANY REMOVAL OR TRIMMING OPERATIONS CARE SHALL BE TAKEN TO LEAVE THE GRASS/GROUNDCOVER OF THE BERM INTACT TO PREVENT THE POSSIBILITY OF EROSION.
- 3. THE DRAINAGE BASIN SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION A MINIMUM OF ONCE PER YEAR. ACCUMULATED SEDIMENTS SHALL BE REMOVED AS REQUIRED BUT AT A MINIMUM OF ONCE EVERY FIVE YEARS. HEAVY MACHINERY MAY BE USED, HOWEVER, ALL AREAS WHICH WERE STABILIZED WITH GRASS/GROUNDCOVER SHALL BE PROMPTLY RE-ESTABLISHED, IF DISTURBED. REMOVAL OF SEDIMENTS ENTRAPPED IN AREAS OF RIP-RAP AND INLET/OUTLET PIPES SHALL ALSO BE REMOVED, BY HAND IF NECESSARY. ANY RIP-RAP DISTURBED, SHALL BE RE-ESTABLISHED IN ACCORDANCE WITH THE ORIGINAL CONSTRUCTION SPECIFICATIONS.
- 4. ALL EROSION AT OUTLETS SHALL BE REPAIRED AND/OR THE REPLACEMENT OF ANY PIPE OR DRAINAGE STRUCTURE SHALL MATCH THE ORIGINAL DESIGN SPECIFICATIONS.

EROSION & SEDIMENTATION CONTROL PLAN

GENERAL:

- 1. THIS PLAN IS ALSO INTENDED TO PROVIDE GUIDANCE AND INSTRUCTION TO THE OWNER AND CONTRACTOR(S) IN THE PREVENTION OF EROSION AND SEDIMENTATION ON AND OFF-SITE.
- 2. THIS PLAN IS PART OF A SET OF DOCUMENTS THAT ARE TO BE VIEWED AND REVIEWED IN THEIR ENTIRETY, SUCH DOCUMENTS INCLUDE THE CONSTRUCTION SPECIFICATIONS, CONSTRUCTION PLANS AND ANY PERMITS ISSUED BY THE TOWN OF GRAFTON, AGENTS OF THE TOWN OF GRAFTON OR OTHER REGULATORY AGENCIES.
- 3. THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION'S ISSUED STANDARDS ARE HEREBY MADE PART OF THIS PLAN SET AND SHALL BE READ FOR ADDITIONAL CRITERIA.

EROSION CONTROL MEASURES:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EROSION AND SEDIMENTATION ARE CONTROLLED. THIS PLAN SHALL BE SHALL BE ADAPTED TO FIT THE CONTRACTOR'S EQUIPMENT, WEATHER CONDITIONS, AND ANY SPECIAL CONDITIONS ISSUED BY ANY OTHER REGULATORY AGENCY OF THE TOWN OF GRAFTON.
- 2. THE MOST IMPORTANT ASPECTS OF CONTROLLING EROSION AND SEDIMENTATION ARE LIMITING THE EXTENT OF DISTURBANCE AND STABILIZING SURFACES AS SOON AS POSSIBLE. OF SECONDARY IMPORTANCE IN EROSION CONTROL IS THE LIMITING THE SIZE AND LENGTH OF THE TRIBUTARY DRAINAGE AREA WITHIN THE WORK SITE AND DRAINAGE STRUCTURES. THESE FUNDAMENTAL PRINCIPLES SHALL BE THE KEY FACTOR IN THE CONTRACTOR'S CONTROL OF EROSION ON THE SITE.
- 3. THE EXISTING SOIL CONDITIONS PROVIDE THE POTENTIAL OF RUNOFF TO OFF-SITE AREAS WITH EROSION POTENTIAL.
- 4. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY DIVERSION SWALES AND SETTLING BASINS IN AREAS OF FUTURE CONSTRUCTION. CONSTRUCTION IS PERMITTED BEYOND THE LIMIT OF DISTURBANCE ONLY WHEN ADDITIONAL DRAINAGE MEASURES OR STABILIZATION MEASURES ARE NEEDED, AND SHALL BE SUBJECT TO APPROVAL BY THE GRAFTON ENGINEERING DEPARTMENT, PRIOR TO WORK OUTSIDE OF DESIGNATED LIMIT OF DISTURBANCE LINE. THE LIMIT OF DISTURBANCE LINE SHALL BE THE EROSION CONTROL BARRIER.
- 5. ALL DISTURBED SURFACES SHALL BE STABILIZED A MINIMUM OF 14 DAYS AFTER CONSTRUCTION IN ANY PORTION OF THE SITE HAS CEASED OR IS TEMPORARILY HALTED UNLESS ADDITIONAL CONSTRUCTION IS INTENDED TO BE INITIATED WITHIN 21 DAYS.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL EROSION CONTROL DEVICES ON-SITE. ALL EROSION CONTROL DEVICES SHALL BE REGULARLY INSPECTED. ANY SEDIMENTS REMOVED FROM THE CONTROL DEVICES SHALL BE DISPOSED OF OUTSIDE OF 100' FROM THE WETLANDS BUFFER ZONE.
- 7. AT NO TIME SHALL SILT-LADEN WATER BE ALLOWED TO ENTER SENSITIVE AREAS (WETLANDS, OFF-SITE AREAS AND DRAINAGE SYSTEMS). ANY RUNOFF FROM DISTURBED SURFACES SHALL BE DIRECTED THROUGH SETTLING BASINS AND EROSION CONTROL BARRIERS PRIOR TO ENTERING ANY SENSITIVE AREAS.

GENERAL CONSTRUCTION REQUIREMENTS:

- 1. ANY REFUELING OF CONSTRUCTION VEHICLES AND EQUIPMENT SHALL TAKE PLACE OUTSIDE OF THE 100 FOOT BUFFER ZONE TO THE ENTRANCE TO THE DRAINAGE SYSTEM, AND SHALL NOT BE CONDUCTED IN PROXIMITY TO SEDIMENTATION BASINS OR DIVERSION SWALES.
- 2. NO ON-SITE DISPOSAL OF SOLID WASTE, INCLUDING BUILDING MATERIALS IS ALLOWED. THE BURIAL OF STUMPS, CONSTRUCTION DEBRIS OR OTHER MATERIALS SHALL NOT BE ALLOWED ANYWHERE ON-SITE.
- 3. NO MATERIALS SHALL BE DISPOSED OF INTO THE WETLANDS OR EXISTING OR PROPOSED DRAINAGE SYSTEMS. ALL CONTRACTORS INCLUDING: CONCRETE SUPPLIERS, PAINTERS AND PLASTERERS, SHALL BE INFORMED THAT THE CLEANING OF EQUIPMENT IS PROHIBITED IN AREAS WHERE THE WASH-WATER WILL DRAIN DIRECTLY TO THE SITE DRAINAGE SYSTEMS.
- 4. CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL WHICH SHALL INCLUDE STREET SWEEPING OF ALL PAVED SURFACES WITHIN THE SITE AND OFF-SITE AREAS FOR TOWN OF GRAFTON IMPACTED BY SITE CONSTRUCTION ON A REGULAR BASIS, AS NEEDED.

PRE-CONSTRUCTION:

- 1. AN EROSION CONTROL BARRIER (SEE BELOW) SHALL BE INSTALLED AS DEPICTED ON THE SITE PLAN, BETWEEN THE AREAS TO BE DISTURBED AND OFFSITE AREAS. THIS BARRIER SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY SURFACES HAVE BEEN FULLY STABILIZED. THE EROSION CONTROL BARRIERS AS SHOWN ON THE SITE PLAN ARE THE MINIMUM REQUIRED TO PROTECT THE ON & OFF SITE DRAINAGE SYSTEMS.
- 2. PHOTOGRAPHS AND/OR VIDEO IMAGES OF THE PRE-CONSTRUCTION CONDITION OF THE SITE AND SURROUNDING AREAS, ESPECIALLY THE ADJACENT STREETS SHALL BE TAKEN, DEVELOPED AND DATED. A COPY OF THESE MATERIALS SHALL BE SUBMITTED TO THE ARCHITECT, AND OWNER FOR THEIR FILES. THESE PICTURES AND IMAGES SHALL REFERENCE EXISTING SITE CONDITIONS AND PERMANENT REFERENCE MARKS TO ENABLE RECOGNITION OF THE AREA BEING PHOTOGRAPHED, AND SHALL REPRESENT A COMPREHENSIVE VIEW OF THE SITE PRIOR TO DEVELOPMENT.
- 3. THE CONTRACTOR SHALL ESTABLISH A STAGING AREA ON A PORTION OF THE AREA TO BE DISTURBED FOR THE OVERNIGHT STORAGE OF EQUIPMENT AND STOCKPILING OF MATERIALS.
- 4. IN THE STAGING AREA, THE CONTRACTOR SHALL HAVE A STOCKPILE OF MATERIALS REQUIRED TO CONTROL EROSION ON-SITE TO BE USED TO SUPPLEMENT OR REPAIR EROSION CONTROL DEVICES. THESE MATERIALS SHALL INCLUDE, BUT ARE NOT LIMITED TO: HAYBALES, SILT FENCE AND CRUSHED STONE.
- 5. A TEMPORARY STONE CONSTRUCTION ENTRANCE IS REQUIRED TO PREVENT TRACKING OF SILT, MUD, ETC. ONTO EXISTING ROADS. THE STONE SHALL BE REPLACED REGULARLY AS WELL AS WHEN THE STONE IS SILT LADEN OR EQUIPMENT IS OBSERVED TO BE TRACKING SOIL ONTO THE ROADWAYS.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL ON SITE AND SHALL UTILIZE EROSION CONTROL MEASURES WHERE NEEDED, REGARDLESS OF WHETHER THE MEASURES ARE SPECIFIED HEREIN, ON THE PLAN OR IN ANY ORDER OF CONDITIONS.

PRELIMINARY SITE WORK:

- 1. MATERIAL REMOVED SHOULD BE STOCKPILED, SEPARATING THE TOPSOIL FOR FUTURE USE ON THE SITE. EROSION CONTROLS SHALL BE UTILIZED ALONG THE DOWNSLOPE SIDE OF THE PILES IF THE PILES ARE TO REMAIN MORE THAN THREE WEEKS.
- 2. STOCKPILES SHALL BE LOCATED AS SPECIFIED HEREIN AND AS REQUIRED. SHOULD ADDITIONAL AREAS BE NEEDED THEY SHALL BE LOCATED WITHIN THE LIMITS OF DISTURBANCE, IN AREAS OF MINIMAL IMPACT. IF A STOCKPILE IS LOCATED ON A SLOPE, THE RUNOFF SHALL BE DIRECTED AWAY FROM THE PILE.
- 3. IF INTENSE RAINFALL IS ANTICIPATED, THE INSTALLATION OF SUPPLEMENTAL HAYBALE DIKES, SILT FENCES, OR ARMORED DIKES SHALL BE UTILIZED.
- 4. IF THE SITE CONSTRUCTION OCCURS AT ANY TIME OTHER THAN THE MAY – NOVEMBER CONSTRUCTION SEASON, THE SITE DRAINAGE SYSTEM SHALL BE INSTALLED, MAINTAINING HYDRAULIC CAPACITY, PRIOR TO ANY ROUGH GRADING IN THE BUFFER ZONE.

DRAINAGE SYSTEM:

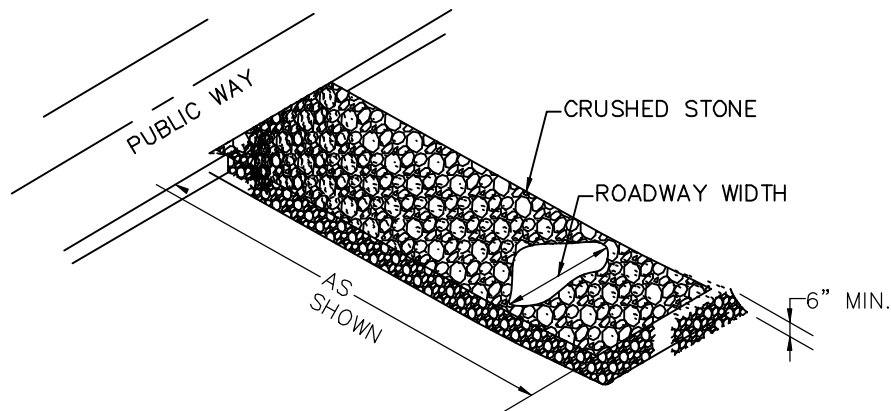
- 1. THE DRAINAGE SYSTEM SHALL BE INSTALLED FROM THE DOWNSTREAM END UP.
- 2. RIP RAP SHALL BE INSTALLED AT THE PIPE INLETS AND OUTLETS IMMEDIATELY UPON THE PLACEMENT OF THE PIPE. A SILT FENCE SHALL BE INSTALLED UPSTREAM OF ANY TEMPORARY BASINS AND SWALES. IT SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY AREAS ARE STABILIZED.
- 3. WATER SHALL NOT BE ALLOWED TO ENTER PIPES FROM UN-STABILIZED SURFACES.
- 4. TRENCH EXCAVATIONS SHALL BE LIMITED TO THE MINIMUM LENGTH REQUIRED FOR DAILY PIPE INSTALLATION. ALL TRENCHES SHALL BE BACKFILLED AS SOON AS POSSIBLE. THE ENDS OF PIPES SHALL BE CLOSED NIGHTLY WITH PLYWOOD.
- 5. IF UNSTABLE AREAS ARE ENCOUNTERED DUE TO NATURAL SPRINGS OR GROUNDWATER BREAKOUT, INTERCEPTOR DRAINS SHALL BE INSTALLED TO DIRECT THE RUNOFF INTO THE DRAINAGE SYSTEM.
- 6. IT IS IMPORTANT THAT THE BINDER COURSE, WITH BERMS, BE INSTALLED ON THE LIMITS OF THE PARKING LOT AND ACCESS ROADS AS SOON AS FEASIBLE AS THESE AREAS WILL FUNCTION AS A CONDUIT FOR RUNOFF.

WATER SUPPLY AND UTILITIES:

- 1. CARE SHALL BE TAKEN TO ASSURE THAT THE UTILITY TRENCHES DO NOT CHANNELIZE RUNOFF TOWARDS EXISTING STREETS OR OTHER OFF-SITE AREAS.
- 2. THE INSTALLATION OF THE WATER LINES, TEE AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE GRAFTON WATER DEPARTMENT SPECIFICATIONS.
- 3. TRENCH EXCAVATIONS SHALL BE LIMITED TO THE MINIMUM LENGTH REQUIRED FOR DAILY UTILITY INSTALLATION. ALL TRENCHES SHALL BE BACKFILLED AS SOON AS POSSIBLE.

LANDSCAPING:

- 1. LANDSCAPING SHALL OCCUR AS SOON AS POSSIBLE TO PROVIDE PERMANENT STABILIZATION OF DISTURBED SURFACES.
- 2. CONTRACTOR SHALL UTILIZE A VARIETY OF SLOPE STABILIZATION METHODS AND MATERIALS WHICH SHALL BE ADJUSTED TO THE SITE CONDITIONS. EROSION CONTROL BLANKETS OR MIRAFI MIRAMAT (OR SIMILAR PRODUCTS) SHALL BE AVAILABLE ON SITE.
- 3. IF THE SEASON OR ADVERSE WEATHER CONDITIONS DO NOT ALLOW THE ESTABLISHMENT OF VEGETATION, TEMPORARY MULCHING WITH HAY, TACKIFIED WOOD CHIPS OR OTHER METHODS SHALL BE PROVIDED.
- 4. A MINIMUM OF 6" TOPSOIL SHALL BE PLACED AND ITS SURFACE SMOOTHED TO THE SPECIFIED GRADES.
- 5. SEED APPLICATIONS SHALL BE IN ACCORDANCE WITH THE GRASS AND SLOPE COVER SPECIFICATIONS (SEE SHEET C-5).
- 6. TO ENSURE A DENSE, SUCCESSION GROWTH, SEED MIXTURE TYPE "C" IS REQUIRED ON ALL DISTURBED SURFACES, EXCEPT WHERE LAWN AREA IS PROPOSED, WHERE SEED MIXTURE TYPE "A" IS REQUIRED (SEE SHEET C-5).



NOTES:
1. REPLACE STONE & ACCUMULATED DEBRIS, MUD & ENTRAPPED MATERIALS AS IS NECESSARY TO PREVENT TRACKING ON PUBLIC ROADWAYS. REPLACE MONTHLY AS A MINIMUM REQUIREMENT.

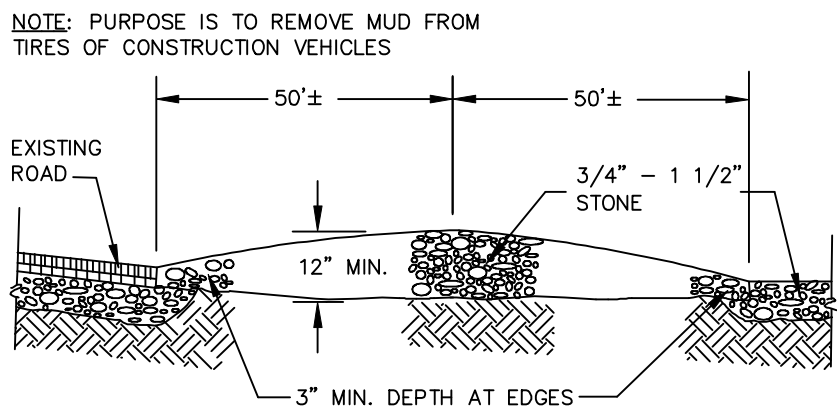
2. DISPOSE OF STONE & ENTRAPPED MATERIALS IN A NON SENSITIVE AREA ON-SITE.

3. DO NOT REUSE STONE FOR SAME PURPOSE.

4. ALL TRAFFIC ENTERING / EXISTING SITE TO CROSS TEMPORARY CONSTRUCTION ENTRANCE

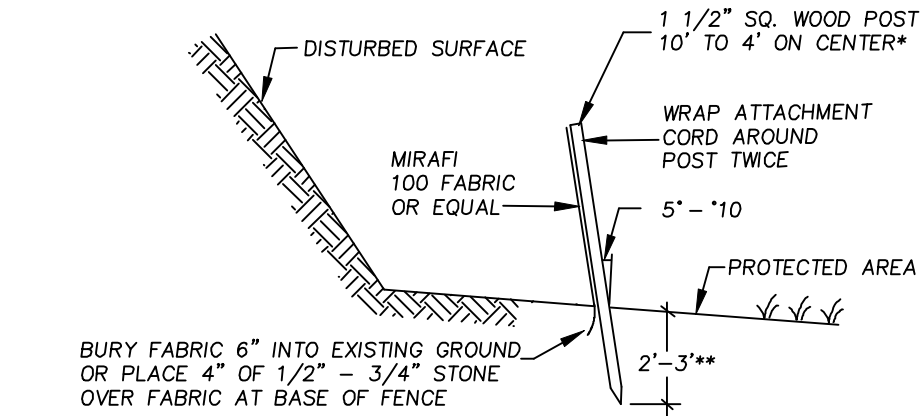
TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE



TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE

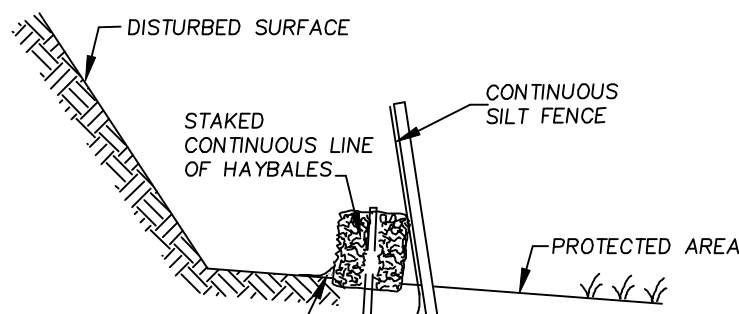


* STEEL POST MAY BE SUBSTITUTED, DISTANCE BETWEEN POSTS TO VARY AS REQUIRED BY TRIBUTARY AREA: 10' FOR 100 SF/LF FENCE 6' FOR 500 SF/LF FENCE

** DEPTH TO VARY WITH TRIBUTARY AREA: 2' FOR 100 SF ETC. IF POST IS TO BE SET IN PEAT OR UNSTABLE SOILS, THEN 3' OR DEPTH NECESSARY TO PROVIDE A STABLE POST FOR LOADED FENCE CONDITIONS

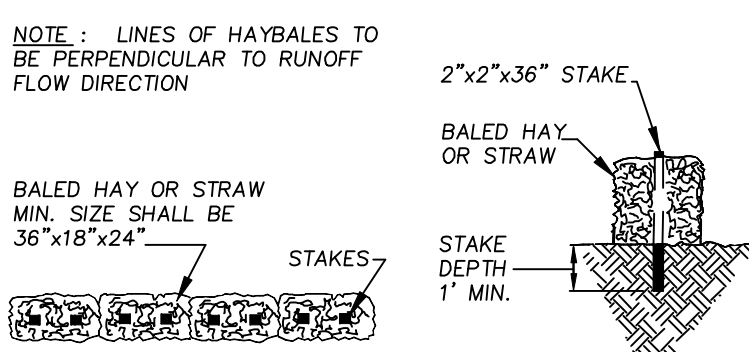
SILT FENCE DETAIL

NOT TO SCALE



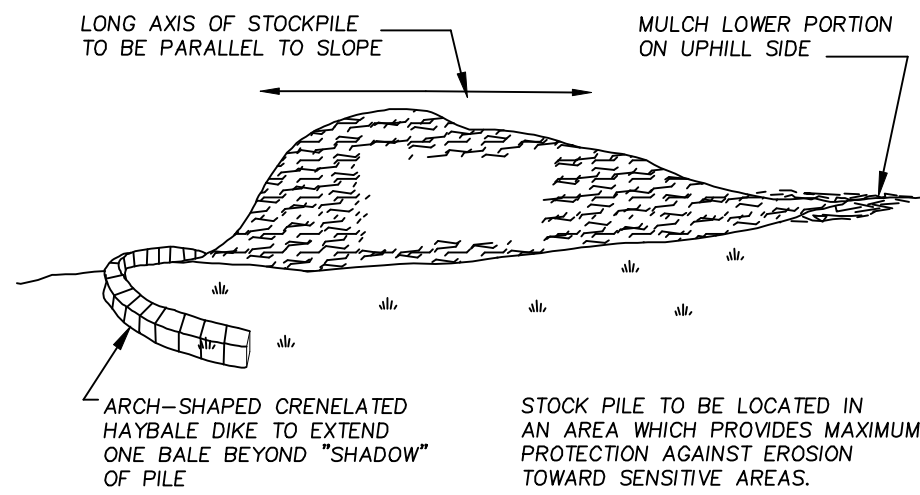
SILTATION BARRIER

NOT TO SCALE



HAYBALE BARRIER

NOT TO SCALE



TEMPORARY STOCKPILE

NOT TO SCALE

TOWN OF GRAFTON

PLANNING BOARD

DEFINITIVE APPROVAL

APPROVAL UNDER THE SUBDIVISION CONTROL LAW IS REQUIRED

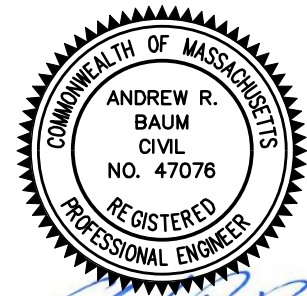
DATE

BEING A MAJORITY OF THE BOARD

THIS IS TO CERTIFY THAT NOTICE FROM THE PLANNING BOARD OF APPROVAL WAS RECEIVED AND RECORDED BY ME ON _____ AND THAT NO NOTICE OF APPEAL OF SUCH APPROVAL WAS RECEIVED BY ME DURING THE TWENTY (20) DAYS NEXT AFTER RECEIPT AND RECORDING OF SUCH NOTICE OF APPROVAL.

TOWN CLERK

DATE



EROSION AND SEDIMENT CONTROL PLAN

REVISIONS

SUMMIT

Engineering & Survey, Inc.

710 MAIN STREET

OXFORD, MA 01537

P:(508) 987-8713 F:(508) 987-8714

DEFINITIVE SUBDIVISION PLAN

"MEADOWBROOK MANOR"

GRAFTON, MA

PREPARED FOR

ROBERT G. FLYNN SR.

SCALE: AS SHOWN
DATE: MARCH 14, 2019
JOB NO: 18-102
PLAN NO: 18-102
SHEET NO: 6 OF 7

